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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,929	07/26/2001	Chris A. Barton	NAIIP014/01.128.01	8771
28875	7590	10/09/2008		
Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			EXAMINER PYZOCHA, MICHAEL J	
			ART UNIT 2437	PAPER NUMBER
			MAIL DATE 10/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/916,929	Applicant(s) BARTON ET AL.	
	Examiner MICHAEL PYZOSHA	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 17-29 and 33-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 17-29 and 33-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/26/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-13, 17-29 and 33-44 are pending.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/26/2008 has been entered.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 08/26/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 17-29, 33 and 35-44 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 17-29 relate to a computer program product comprising computer code. Computer code is merely software and as such, these claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the mean of 35 USC §101. They are clearly not a

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series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*. Similarly, claim 33 relates to a system comprising logic and as described on page 7 of the specification the logic is merely software and therefore lacks the necessary physical articles to constitute a machine. Claims 35-44 related to a system with means for performing certain steps utilizing certain hardware. However, the claims fail to positively recite any hardware and as such the means for is merely logic and as above the logic is software. Therefore, claims 17-29, 33 and 35-44 are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 2, 4-7 8-13, 17-18, 20-24, 25-29, 33-35, 38-40, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grupe (US 20020194212 in view of Futral (US 6615282) and further in view of Peikari (US 20020166085).

As per claims 1, 17 and 33, Grupe discloses a) executing scanning control logic utilizing a central processing unit (see paragraphs [0008] and [0009]); b) identifying a request related to data at the central processing unit (see paragraphs [0008] and [0009]); c) indicating the data to a scanning co-processor coupled to the central

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processing unit so that the data is scanned by the scanning co-processor under control of the scanning control logic (see paragraphs [0008] and [0009]); d) waiting for results from the scanning co-processor (see paragraphs [0008] and [0009]); e) executing additional logic utilizing the central processing unit while waiting for the results from the scanning co-processor (see paragraphs [0008],[0009] and [0016]); f) initiating an event based on the results from the scanning co-processor (see paragraphs [0015] and [0017]); g) wherein the scanning co-processor is under the control of the central processing unit via the execution of the scanning control logic by the central processing unit (see paragraphs [0008] and [0009]); h) wherein it is determined whether the data meets a predetermined criteria, where the criteria is based on a type of a file associated with the data (see paragraphs [0012] and [0036]); i) wherein the data is sent to the scanning co-processor if it is determined that the data meets the predetermined criteria (see paragraphs [0012] and [0036]); j) wherein additional data to be scanned by the scanning co-processor is queued while waiting for the results from the scanning co-processor (see paragraph [0009]).

Grupe fails to explicitly disclose indicating the location of the data to a scanning co-processor wherein the location of the data includes a memory location of the data stored in memory, where the memory is separate from and coupled to the scanning co-processor and the central processing unit via a bus that employs direct memory access and that the scanning co-processor is capable of performing an additional scan on the additional data while scanning the data.

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However, Futral teaches indicating the location of the data to a co-processor wherein the location of the data includes a memory location of the data stored in memory, where the memory is separate from and coupled to the scanning co-processor and the central processing unit via a bus that employs direct memory access (see column 4 lines 22-37 and column 9 lines 1-5 where the network connection is the bus) and Peikari teaches a scanning processor is capable of performing an additional scan on the additional data while scanning the data (see paragraph [0012]).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to indicate the location in memory connected using a bus to the scanning co-processor of Grupe and for the scanning co-processor to be capable of scanning additional data while scanning other data.

Motivation to do so would have been to enable protected target-managed data transfer (see Futral column 3 lines 55-57) and to improve the efficiency of the scanning (see Peikari paragraph [0012]).

As per claims 2 and 18, the modified Grupe, Futral and Peikari system discloses processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected (see Grupe paragraphs [0015], [0030]).

As per claims 4, 7, 20, and 23, the modified Grupe, Futral and Peikari system discloses wherein the scanning control logic includes hardware (see Grupe paragraph [0011]).

As per claims 5 and 21, the modified Grupe, Futral and Peikari system discloses wherein the scanning control logic is stored on the scanning co-processor (see Grupe paragraph [0009]).

As per claims 6 and 22, the modified Grupe, Futral and Peikari system discloses wherein the scanning control logic includes software (see Grupe paragraph [0011]).

As per claims 8 and 24, the modified Grupe, Futral and Peikari system discloses wherein the event is initiated under the control of the scanning control logic (see Grupe paragraphs [0010]-[0011], [0015]-[0016]).

As per claims 9 and 25, the modified Grupe, Futral and Peikari system discloses wherein the scanning co-processor performs content scanning (see Grupe paragraph [0011]).

As per claims 10 and 26, the modified Grupe, Futral and Peikari system discloses wherein the scanning co-processor performs virus scanning (see Grupe paragraph [0011]).

As per claims 11 and 27, the modified Grupe, Futral and Peikari system discloses wherein the scanning co-processor includes memory (see Grupe paragraph [0016]).

As per claims 12 and 28, the modified Grupe, Futral and Peikari system discloses wherein virus signatures are stored in memory (see Grupe paragraphs [0011] and [0028]).

As per claims 13 and 29, the modified Grupe, Futral and Peikari system discloses wherein rule sets are stored in memory (see Grupe paragraph [0011]).

As per claims 34 and 35, the modified Grupe, Futral and Peikari system discloses j) initiating a security event upon the receipt of unfavorable results from the scanning co-processor including a situation where malicious code is detected (see Grupe paragraphs [0015] and [0017]); k) processing the data utilizing the central processing unit upon the receipt of favorable results from the scanning co-processor including a situation where malicious code is not detected (see Grupe paragraph [0015]).

As per claim 38, the modified Grupe, Futral and Peikari system discloses wherein the criteria is further based on a user (see Grupe paragraph [0036]);

As per claim 39, the modified Grupe, Futral and Peikari system discloses wherein the criteria is further based on software logic run by a bios (see Grupe paragraph [0036]).

As per claim 40, the modified Grupe, Futral and Peikari system discloses wherein the scanning control logic is executed automatically (see Grupe paragraph [0009]).

As per claim 42, the modified Grupe, Futral and Peikari system discloses wherein the scanning control logic is executed manually by a user (see Grupe paragraph [0028]).

As per claim 44, the modified Grupe, Futral and Peikari system discloses wherein the central processing unit aids the scanning co-processor when a large amount of data is to be scanned (see Grupe paragraph [0016]).

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7. Claims 3, 19, 36, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Grupe, Futral and Peikari system further in view of Zuta (WO 98/45778).

As per claims 3 and 19, the modified Grupe, Futral and Peikari system fails to explicitly disclose that the CPU is coupled to the scanning co-processor via a bus.

Zuta teaches a similar anti-virus scanning system in which a supervisor computer (2 of Fig 2) monitors the data processed by the CPU of a first computer (11 of Fig 2) and intervenes to stop the CPU of the first computer if the supervisor computer thinks a virus might be present. Zuta also discloses that the CPU of the first computer and the scanning co-processor of the supervisor computer are coupled by a bus (17 of Fig 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Zuta with those of the modified Grupe, Futral and Peikari system and add the use of a bus between the CPU of the first computer and the scanning co-processor of the second computer

Motivation, as recognized by one of ordinary skill in the art, to do so would have been that a bus is a commonly used method of transmitting data between two units.

As per claim 36, the modified Grupe, Futral, Peikari and Zuta system discloses the scanning information is updated via a network periodically (see Zuta Page 12, 2nd paragraph).

As per claim 41, the modified Grupe, Futral, Peikari and Zuta system discloses the scanning control logic is executed automatically when a computer is booted up (see Zuta Page 24, lines 1-3).

As per claim 43, the modified Grupe, Futral, Peikari and Zuta system discloses the scanning control logic is executed using software logic run by a bios (see Zuta Page 24, lines 1-3).

8. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Grupe, Futral and Peikari system further in view of Snavely, (Snavely, Allan; Tullsen, Dean. Symbiotic Jobscheduling for a Simultaneous Multithreading Processor. Published in the Proceedings of ASPLOS IX. November 2000).

As per claim 37, the modified Grupe, Futral and Peikari system fails to explicitly disclose the use of multi-threading algorithms.

However, Snavely teaches that multi-threading algorithms are an effective way to “increase system utilization and speedup the execution of jobs” (see Snavely Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was filed to incorporate the ideas of Snavely with those of the modified Grupe, Futral and Peikari system and use multi-threading algorithms

Motivation to do so would have been that multi-threading algorithms are an effective way to deal with multi-job processing such as with additional logic to be executed or additional data queued to be scanned.

Response to Arguments

9. Applicant's arguments with respect to claims 1-13, 17-29 and 33-44 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Parthasarathy et al. (US 20020191599) teaches the use of direct memory access for obtaining data.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL PYZOCHA whose telephone number is (571)272-3875. The examiner can normally be reached on Monday-Thursday, 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Michael Pyzocha/
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